Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A routing device comprising:

an operating system kernel;

a plurality of physical interfaces configured to receive packets to be forwarded;

a plurality of virtual routers, wherein the plurality of virtual routers comprise a plurality of instructions for controlling a data processor to perform one or more tasks, the instructions being stored on a computer readable medium, and wherein the plurality of virtual routers are external to the operating system kernel, wherein each virtual router further comprises:

a routing protocol stack configured to handle a plurality of routing protocols;

a plurality of interface drivers configured to communicate with at least a one of the plurality of physical interfaces;

an Internet Protocol (IP) stack configured to interact with the routing protocol stack and perform a forwarding function via the plurality of interface drivers, the IP stack having a forwarding information table, information from which is used to perform the forwarding function, wherein the routing protocol stack and the IP protocol stack are implemented using dynamic libraries shared among the plurality of virtual routers; and

a socket layer having a corresponding socket application programming interface, the socket layer configured to facilitate interactions between the IP stack and the routing protocol stack and the application, wherein the socket application programming interface is used to facilitate communications with the socket layer;

a router manager configured to manage the plurality of virtual routers, wherein the router manager is configured to couple each virtual router to at least one of the physical interfaces; and

an application, wherein the application is situated external to the plurality of virtual routers, and wherein the application being configured to receive requests to perform a plurality of tasks for at least one client ~~application~~;

wherein the application is able to selectively communicate with one or more of the plurality of virtual routers and the operating system kernel on a dynamic basis to perform the plurality of tasks for the at least one client application, wherein the application selects a virtual router to perform a task based upon a set of routing protocols supported by the virtual router and the task to be performed;

wherein the IP stack of each of the plurality of virtual routers resides external to the operating system kernel;

wherein the operating system kernel further includes an associated socket layer, the socket layer having a corresponding socket application programming interface; and

wherein the application is able to communicate with the operating system kernel via the associated socket layer using the corresponding socket application programming interface to have the operating system kernel perform one or more of the plurality of tasks.

2. (previously presented) The routing device of claim 1 wherein software is used to implement the router manager.

3-5. (canceled).

6. (original) An UNIX system incorporating the routing device as recited in claim 1.

7. (currently amended) A routing device comprising:
an operating system kernel;
a plurality of virtual routers, wherein the virtual routers reside external to the operating system kernel, and wherein the virtual routers each include a routing protocol stack and an IP protocol stack that are implemented using dynamic libraries shared among a plurality of virtual routers, and wherein the virtual routers further include:

a routing protocol stack configured to handle a plurality of routing

protocols;

a plurality of interface drivers configured to communicate with

corresponding physical interfaces;

an Internet Protocol (IP) stack configured to interact with the routing

protocol stack and perform a forwarding function via the plurality of interface drivers, the IP

stack having a forwarding information table, information from which is used to perform the

forwarding function; and

a socket layer having a corresponding socket application programming

interface, the socket layer configured to facilitate interactions between the IP stack and the

routing protocol stack and the application, wherein the socket application programming interface

is used to facilitate communications with the socket layer;

a router manager configured to manage the virtual router;

an application residing external to the plurality of virtual routers, the application

being configured to receive requests to perform a plurality of tasks for at least one client

~~application~~; and

a plurality of physical interfaces configured to receive packets to be forwarded;

wherein the application is able to selectively interact with the virtual router and

the operating system kernel on a dynamic basis in order to have the virtual router and the

operating system kernel perform a plurality of tasks for the for the at least one client application,

wherein the application selects a virtual router to perform a task based upon a set of routing

protocols supported by the virtual router and the task to be performed;

wherein the operating system kernel further includes an associated socket layer,

the socket layer having a corresponding socket application programming interface; and

wherein the application is able to communicate with the operating system kernel

via the associated socket layer using the corresponding socket application programming interface

to have the operating system kernel perform one or more of the plurality of tasks.

8. (original) The routing device of claim 7 wherein software is used to implement the virtual router and the router manager.

9. (canceled).

10. (currently amended) The routing device of claim [[9]] 7 wherein the IP stack of the virtual router resides external to the operating system kernel.

11. (canceled).

12. (original) An UNIX system incorporating the routing device as recited in claim 7.

13. (currently amended) A routing device comprising:

an operating system kernel;

a plurality of physical interfaces configured to receive packets to be forwarded;

a plurality of virtual routers, each virtual router having an associated socket layer and an Internet Protocol (IP) stack, the associated socket layer having a corresponding socket application programming interface configured to facilitate communications with the associated socket layer, wherein each virtual router includes a routing protocol stack configured to communicate with corresponding physical interfaces, [[and]] wherein the routing protocol stack and the IP protocol stack are implemented using dynamic libraries shared among the plurality of virtual routers, wherein the virtual routers further include:

a plurality of interface drivers configured to communicate with corresponding physical interfaces, wherein the Internet Protocol (IP) stack is configured to interact with the routing protocol stack and perform a forwarding function via the plurality of interface drivers, the IP stack having a forwarding information table, information from which is used to perform the forwarding function; and

a socket layer having a corresponding socket application programming interface, the socket layer configured to facilitate interactions between the IP stack and the

routing protocol stack and the application, wherein the socket application programming interface is used to facilitate communications with the socket layer; and

an application residing external to the plurality of virtual routers;

wherein the associated socket layer is configured to facilitate interactions between the IP stack and the application;

wherein the application is able to selectively interact with one of the plurality of virtual routers via the associated socket layer;

wherein the application is configured to receive requests to perform a plurality of tasks for at least one client application;

wherein the application uses the corresponding socket application programming interface to interact with the associated socket layer; and

wherein the application is able to selectively interact with one or more of the plurality of virtual routers and the operating system kernel on a dynamic basis in order to have one or more of the plurality of virtual routers and the operating system kernel perform a plurality of tasks for the at least one client ~~application~~, wherein the application selects a virtual router to perform a task based upon a set of routing protocols supported by the virtual router and the task to be performed;

wherein the operating system kernel further includes an associated socket layer, the socket layer having a corresponding socket application programming interface; and

wherein the application is able to communicate with the operating system kernel via the associated socket layer using the corresponding socket application programming interface to have the operating system kernel perform one or more of the plurality of tasks.

14. (canceled).

15. (original) The routing device of claim 13 wherein the corresponding IP stacks of the plurality of virtual routers reside external to the operating system kernel.

16. (original) An UNIX system incorporating the routing device as recited in claim 13.